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Volume II — No. 9 MONTANA FISH AND GAME DEPARTMENT SEPTEMBER, 1967

# The Dance of the Sharptails

by RICHARD TRUEBLOOD, District 6 Game Manager

**ED. NOTE . . . The regulations that govern present bird seasons are based on information gathered over several months. Much of it, in fact, began in early spring with the thump of excited dancing feet.**

A sure sign of spring, and yet one that is witnessed by comparatively few people, is the courtship dancing of sharptailed grouse. Each frosty morning before sunrise, and sometimes in the evenings, the males return to the same ancestral dancing grounds. With feathered legs beating a rapid tattoo, each bird spreads his wings, inflates lavender air sacs, and begins to dance. Frequent fighting breaks out as one male encroaches on the territory of another.

On a morning in late March or early April, the first hens will walk onto the grounds, causing the males to dance with new vigor. At first, they seem unaware of the dancing cocks around them. Occasionally, the observer will witness a hen spreading her wings in open invitation. However, in over ten years of watching dancing grounds, the author saw only one instance of actual mating, indicating that most takes place off the dancing ground.

The significance of this annual display by the various species of prairie grouse is the subject of much debate and speculation. Certainly, the activity of the males tends to advertise their presence to the opposite sex. No hen could possibly remain unaware of the courtship display. Another theory is that the dancing activity provides an outlet for surplus energy. Still another explanation is that the dancing males serve to draw predators away from the hens. No doubt the males, being very preoccupied with their courtship ritual, are more vulnerable to predacious birds and mammals. In fact, the remains of predator-killed birds are commonly found on the grounds by the end of April. This is probably not harmful to the population because the sharptail is a polygamous species and an excess of males in the population is the general rule.

The sharptails prefer fairly open cover for dancing grounds. Very tall vegetation which restricts the birds' movements or visibility is avoided. One spring, when grass growth was exceptionally lush, the author witnessed a group of males dancing on a grassy ground that almost completely hid them. A few days later, however, they had moved their arena about 200 yards to a natural open area in the prairie. Elevated sites also seem to be selected, the better to announce their presence to the females and afford themselves maximum visibility.

While the annual courtship danc-

ing of the sharptails ensures the perpetuation of the species, it also provides the game manager with a means of determining the relative size of each spring's breeding population. This, along with summer brood counts, gives us a basis for season recommendations.

Beginning in early April, field personnel make a careful search for all dancing grounds in selected sharptail habitat. The same areas are covered each year. Newly-established courtship grounds are located by the hooting and dancing sounds of the males, which carry further than a mile on a calm morning. Each ground is carefully approached by car and a count made of the dancing males. The total number of males on all grounds at the peak of the season gives an annual index to compare with previous years.

Information from the McCone County Sharptail Trend Area, dating back to 1956, illustrates the way bird populations fluctuate and how this is used in management. During that time, the number of active grounds within an area of about 35 square miles varied between none and eight. The number of males attending a dancing ground varied between two and thirty.

Fifteen different grounds have been located on this one area since 1956. None of the original grounds are still in existence, although the oldest has been active each year since 1961. Usually, desertion of the dancing ground occurred during a low point in the population when tradition was broken with the disappearance of the older males. As the bird population built back up, new grounds were established. On the McCone County area, these new grounds were never found in the exact spot as the previously abandoned one, although the birds continued to select the elevated, open sites.

Many things can affect the size of a prairie grouse population, but probably one of the most important is the amount of cover available to the birds during the critical winter and nesting periods. Anything, such as overgrazing, that removes most of the native cover one year will have a detrimental effect on grouse populations the following winter and spring. A very dry year may have a similar influence on bird numbers the following year by reducing standing cover necessary for nesting and escape. Table 1 shows that on the McCone County area, the dry years from 1956 to 1961 were generally accompanied by lower bird populations the following year. The recovery of our sharptail numbers in recent years has been associated with improved moisture conditions.

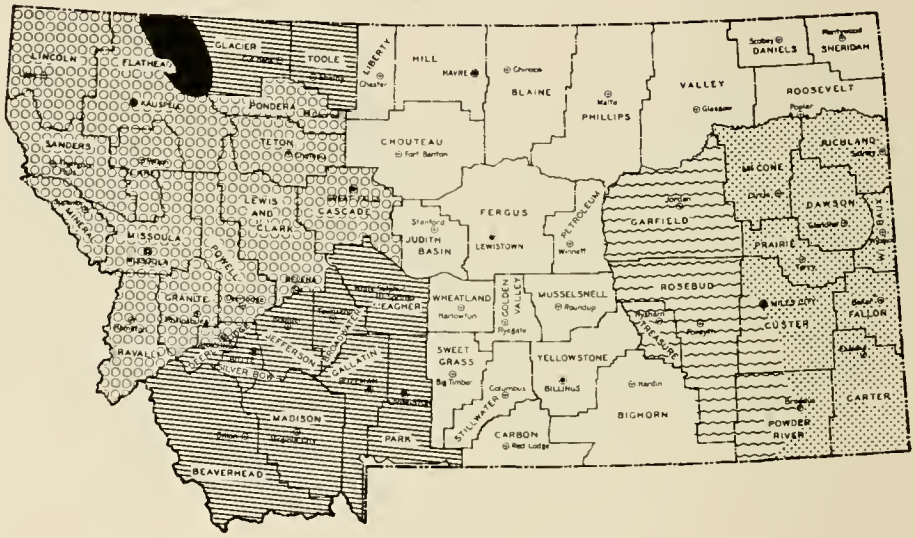
With better understanding of grouse populations and what things affect them, the game manager can often recommend more liberal hunting seasons, to the benefit of the hunter. For example, the 1966 spring surveys in eastern Montana showed an excellent breeding population of sharptails. Nesting conditions were also ideal, and as a result the daily bag was increased from three to four and the season was re-opened for eight days.

Despite a banner 1966 season for the grouse hunter, the 1967 spring counts were generally up and, nesting success, was generally good, and this fall's hunt has had an excellent start.

1967 HUNTING REGULATIONS

FOR

RING-NECKED PHEASANT




| | | |
|---|---|---|
| Oct. 29 (Noon) - Nov. 26 | | Daily, 3 cocks, poss. 6 cocks |
| Oct. 29 (Noon) - Nov. 5 | | Daily, 3 - 1 of which may be hen<br>Poss., 6 - 2 of which may be hens |
| Nov. 6 | - Nov. 26 | Daily, 3 cocks, poss. 6 cocks |
| Oct. 29 (Noon) - Nov. 26 | | Daily, 3 - 1 of which may be hen<br>Poss., 6 - 2 of which may be hens |
| Oct. 29 (Noon) - Nov. 26 | | Daily, 3 - either sex<br>Poss., 6 - either sex |
| Oct. 29 (Noon) - Nov. 12 | | Daily, 3 - either sex<br>Poss., 6 - either sex |

Means of Taking: Ring-necked pheasants may be taken with a shotgun no larger than a ten gauge, or long bow and arrow.

The feet and one wing should remain attached to the carcass of each field-dressed bird.

Areas Closed to Hunting: All State Game Preserves

Notice: National Wildlife Refuges and Indian Reservations are not closed to pheasant hunting by the Montana Fish and Game Commission; however, portions of these refuges and reservations may be closed to trespass by the agency concerned. Hunters are asked to check with the Refuge Manager or Tribal office before hunting on these lands.

**Sharptailed Grouse Dancing Ground Counts and Rainfall, McCone County Trend Area.**

| Year | No. of Grounds | No. of Males | Annual Precipitation[1] |
|---|---|---|---|
| 1955 | .... .. | ------ | 9.9 |
| 1956 | .... 8 | 137 | 7.2 |
| 1957 | .... 7 | 45 | 7.9 |
| 1958 | .... 6 | 62 | 7.4 |
| 1959 | .... 4 | 15 | 10.8 |
| 1960 | .... 0 | 0 | 9.1 |
| 1961 | .... 1 | 16 | 8.4 |
| 1962 | .... 1 | 8 | 14.6 |
| 1963 | .... 3 | 35 | 11.3 |
| 1964 | .... 3 | 39 | 13.9 |
| 1965 | .... 2 | 29 | 21.3 |
| 1966 | .... 3 | 34 | 14.4 |
| 1967 | .... 5 | 87 | ------ |
| Long-range aver. | | 42 | 11.6 |

[1] Based on weather records at Fort Peck.

## "Hunting the Ridge Runners"

If you're the type of hunter who wears his legs off to the knees trying to run down a deer, then you might read "Hunting the Ridge Runners" which appears in the October issue of Field and Stream.

The article deals with hunting deer in Montana and has some interesting tips for getting deer.

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Edited by VERNON CRAIG

# AGE YOUR ELK

In order to determine the age of a horse, cow, deer or elk accurately, one must have a pretty good knowledge of how the animals' teeth develop, how they are replaced, and gradually wear away. But hunters can get a pretty good idea of an elk's age by one elk tooth only.

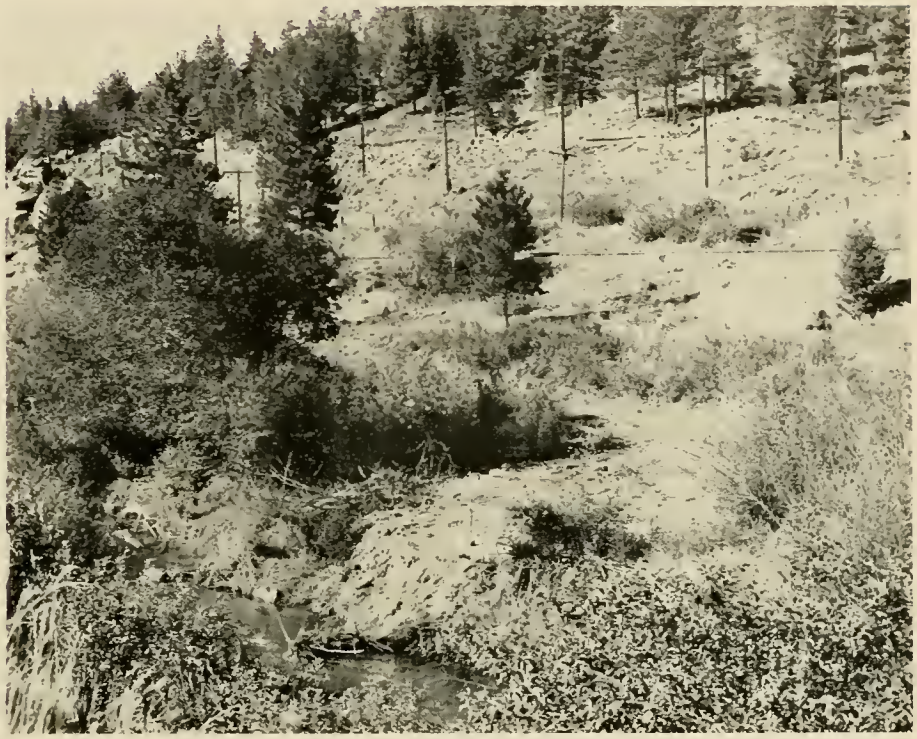
Ken Greer and Harley Yeager of the Fish and Game Department's Wildlife Laboratory have developed a method of aging elk simply by the "elk" or "canine" teeth.

The following two pages show a series of "elk," or "whistler" teeth actual size. The column of three teeth at the left are from males and those from the right are females. The middle row of markings on each tooth shows the age of the elk. For example, 1.9 would indicate an elk 1 year, 9 months old.

By comparing an elk tooth with the photographs, you can get a good idea of the age of elk. Look for general size and shape of tooth, wear, and stain.

Teeth of younger animals show less variation than teeth of older animals. Therefore, the ages of elk can be determined more accurately the younger they are.

## Stream Left in Good Shape Along New Highway



Time was when highway construction punched out new, straight channels for roadside streams and slicked off the willows and other bank vegetation. After the mauling was over, the streams were little more than man-made sluices—poor fish producers.

The accompanying photo shows the new approach for minimizing damage to trout streams which run along areas of highway construction. The curved strip which has been cleared of vegetation will become a new meander of the stream. New stream meanders will be made to replace ones removed, so the stream will neither be straightened nor shortened. Care is taken to disturb the streamside vegetation as little as possible and also to minimize silting. It has been found that a stream may have five times as many pounds of trout in stretches with good brush on the banks as compared to stretches without brush.

With model construction such as this, physical damage to Montana's trout streams will be minimum. The project includes a chunk of Interstate 15 along Prickly Pear Creek near Helena, Montana. The Montana State Highway Department is the responsible agency, and work is being done by Zook Brothers Construction Company.

MALE

FEMALE

CALF

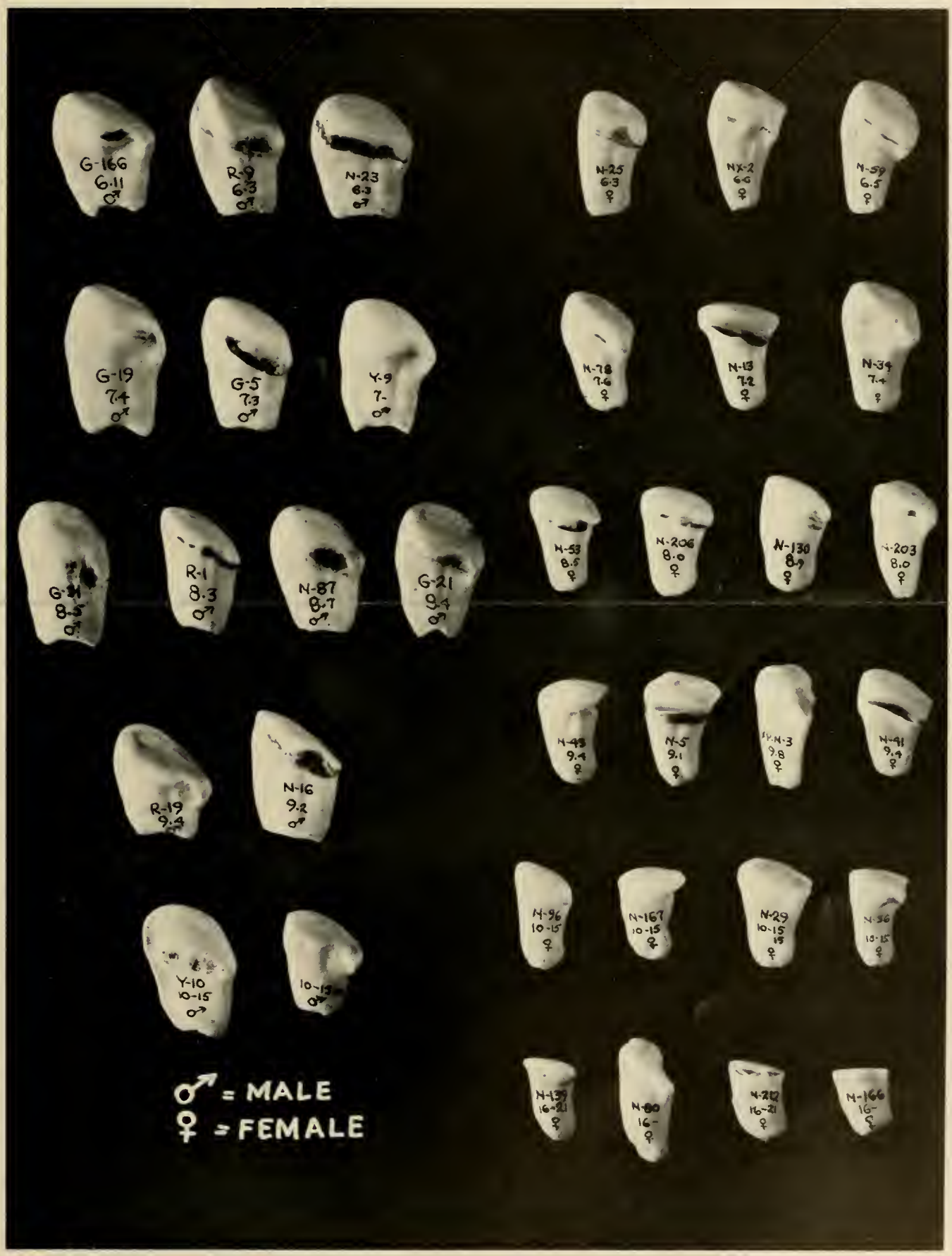
1½ Yr.

2½ Yr.

3½ Yr.

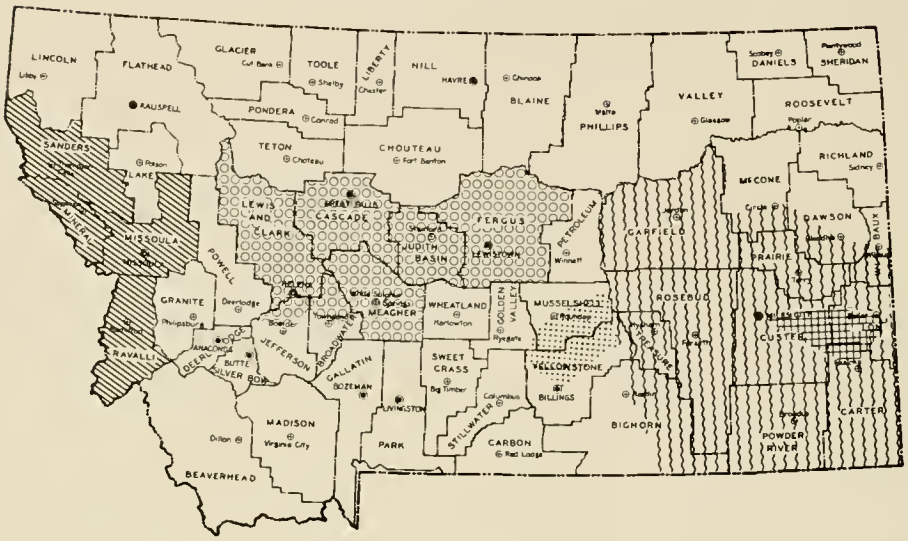
4½ Yr.

5½ Yr.


MALE
FEMALE
6½ Yr.
7½ Yr.
8½ Yr.
9½ Yr.
10-15 Yr.
16-21 Yr.
G-166 6.11 ♂
R-9 6.3 ♂
N-23 6.3 ♂
N-25 6.3 ♀
NX-2 6.6 ♀
N-59 6.5 ♀
G-19 7.4 ♂
G-5 7.3 ♂
Y-9 7- ♂
N-78 7.6 ♀
N-13 7.2 ♀
N-34 7.4 ♀
G-21 8.5 ♂
R-1 8.3 ♂
N-87 8.7 ♂
G-21 9.4 ♂
N-53 8.5 ♀
N-206 8.0 ♀
N-130 8.9 ♀
N-203 8.0 ♀
R-19 9.2 ♂
N-16 9.2 ♂
N-43 9.4 ♀
N-5 9.1 ♀
N-3 9.8 ♀
N-41 9.3 ♀
Y-10 10-15 ♂
10-15 ♂
N-96 10-15 ♀
N-167 10-15 ♀
N-29 10-15 ♀
N-56 10-15 ♀
♂ = MALE
♀ = FEMALE

MERRIAM'S WILD TURKEY - Open season from one-half hour before sunrise to one-half hour after sunset to holders of special wild turkey tags. Hunting will be open on days listed below in areas indicated as open on the accompanying map. The remainder of the state will be closed to wild turkey hunting including State Game Preserves and closures, Hell Creek State Park, and National Parks. For hunting privileges on Indian Reservations, inquire at the local Indian agency.

1967




Open season - Sept. 30 (Noon) through Oct. 8

Open season - Sept. 23 (Noon) through Oct. 1

Open season - Oct. 22 (½ hr. before sunrise through Nov. 5

Open season - Oct. 1 (½ hr. before sunrise through Oct. 29.

Open season - Oct. 22 (½ hr. before sunrise through Nov. 12

Wild turkey may be taken with a shotgun no larger than ten gauge, long bow and arrow, rifle or hand gun.

The tag provided with the special game license must be filled out and affixed to the leg of the turkey immediately after killing and must remain thereon. A hunter may legally take only one turkey during the fall hunt.

# Montana Grayling

When Lewis and Clark journeyed through Montana, they made reference to the abundance of a particular fish in the Missouri River drainage. From a description by Captain Lewis, this was later recognized as the grayling.

Apparently the grayling, in the contiguous 48 states, was native only to Montana and Michigan. It became extinct in Michigan, but was reintroduced there. In Montana it now occurs over only a small fraction of its original range which was the entire Missouri River drainage above Great Falls.

When non-native species of fish have been introduced, both grayling and cutthroat trout have suffered. Present successful grayling waters include those which are free of introduced trout such as eastern brook and brown trout, and so called "rough" fish such as carp and Utah chub.

Most grayling fishing now is maintained largely through artificial propogation.

**PRESENT GRAYLING WATERS:**

**Northwestern Montana**

Cyclone Lake—north fork Flathead (stocked 1966)
Elizabeth Lake — in Glacier National Park
Fishtrap Lake — southwest of Kalispell (stocked 1966)
Half-Moon Lake — near Coram
Handkerchief Lake — on Graves Creek, a tributary to Hungry Horse Reservoir
Lake Five—near Coram
LaSalle Ponds — 10 miles north of Kalispell (introduction, success not known)
Red Meadow Lake — north fork of Flathead near Canadian border

**Western Montana**

Fuse Lake — southwest of Philipsburg on west fork of Rock Creek
Harpers Lake — 15 miles south of Seeley Lake
Heart Lake — 15 miles northeast of Lincoln

**Southwestern Montana**

Bobcat Lake — near Wise River

Ennis Lake and Madison — just below and above lake — near Ennis

Grebe — Ice — Wolf Lake (All in Yellowstone Park)

Hamby Lake — near Jackson

Lake Agnes — near Glen

Mussigbrod Lake — near Wisdom

O'Dell Lake — near Wisdom

Pintlar Lake and other lakes in vicinity) — Beaverhead Drainage near Wisdom

Red Rock River — on and above Red Rocks Refuge

Red Rock Lakes (upper and probably lower) Red Rock Lake

Schwinegar Lake—near Jackson

Upper Big Hole drainage

**Southcentral Montana**

Froze-to-Death Lake — northeast of Cooke City (East Rosebud drainage—stocked, but no verification of success)

Lone Elk Lake — west of Red Lodge (Clark's Fork Drainage)

Rough Lake — west of Red Lodge (Clark's Fork Drainage)

Sky Top Lakes (3 lakes) west of Red Lodge (Clark's Fork Drainage)

Turgulse Lake — northeast of Cooke City (east Rosebud Drainage)

# Montana Railroads and Conservation

**by JOHN WILLARD,**
**Director, Montana Railroad Assn.**

Preservation of natural waters and wild game fish life in Montana is a part of state and national policy which has been overwhelmingly successful in the face of a growing Montana population and rapid technical advances.

Changes in water and in fish life occur in varying degrees with virtually every kind of human activity. Even the fishermen or outdoorsmen who derives the greatest enjoyment and benefit from preservation of these water resources contributes to these changes by requiring access to the streams plus campgrounds and sanitary accommodations not previously in the watershed. Change is largely unavoidable in a growing state and nation and with transportation constantly bringing large metropolitan areas within hours of the state's playgrounds, the problem of stream preservation becomes even more acute.

**Railroads serving Montana have cooperated with the Montana Fish and Game Department in its efforts to conserve waters. On reconstruction projects such as railroad line changes, the railroads have conferred with department biologists and minimized construction effects on the streams or lakes and their fish life.**

Since railroads have been well established in Montana for many years, such changes are far fewer than railroad line changes demanded by enlargement or relocation of adjacent highways or by other construction projects unrelated to railroads. In these cases the railroad has found itself in the position of having to move roadbed, rails and other facilities not for its own convenience or need but for the convenience of the public which uses these projects. Naturally, the railroad cannot accept a new location which is inferior to its previous location or accept facilities which do not permit the maximum use of the railroad plant.

In these cases it is the responsibility of the public agency constructing the highway, dam or other project to accomplish the construction so as to disturb existing water courses and other natural features as little as possible. This is not often easy, and much common sense and cooperative effort is needed on both sides. In any event, the railroad finds itself a third party, without authority to change construction plans except to concur, where practical, with agreements made by the constructing agency and the department. This it has done in many instances in Montana.

**The most recent case of this kind has arisen with the Great Northern Railway in its main line relocation forced upon the railroad by construction of Libby Dam by the U. S. Corps of Engineers. Any stream relocation in this area is being accomplished by the constructing agency and is out of control of the railroad, even though its tracks will occupy the finished relocation. Federal money finances the relocated road, and the fact that Great Northern was satisfied with its present roadbed does not alter the fact it must bear the consequences of major disturbances the same as other citizens similarly affected by various phases of the dam and reservoir construction.**

There have been suggestions that changes in the state stream preservation law may be needed. It should be kept in mind that railroads now are cooperating in the spirit envisioned by this law. It should also be remembered that no change in state law will have the slightest effect on federal agencies constructing facilities which require relocation of railroads.

Montana's railroad industry policy is to work with the Fish and Game Department and organizations interested in wildlife whenever and wherever possible. They have done so frequently in the past by granting easements to allow water for waterfowl developments to be piped under rights-of-way, by issuing instructions that no garbage be dumped from dining cars and thus attract feeding game animals, and in many other ways. Railroads never have erected "No Hunting" or "No Fish-" ing signs on thousands of acres of their land in Montana—much of it prime angling and hunting country.

# Big Game Honor Badges

The sportsman who takes a worthwhile trophy can get a momento in the form of a big game honor badge to wear on his hunting cap or jacket.

Field and Stream has offered these badges since 1950, and a number have already gone to Montanans.

For further information you may write to Field and Stream Big-Game Honor Badges, 383 Madison Ave., New York, New York 10017.

## List of Rules To Better Landowner–Recreationist Relationship

1. Ask permission to hunt or fish.
2. Practice safe gun handling.
3. Leave gates and fences as you find them.
4. Save, burn or bury trash.
5. Respect private property.
6. Respect the rights of others in the field.
7. Stay on travelled roads.
8. Put out camp fires and cigarettes.
9. Obey Fish & Game Regulations.
10. Courtesy, consideration and common sense are the keys for better landowner and recreationist relationships.

# MONTANA FISH AND GAME DEPARTMENT

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